**In the Claims:**

Please amend claim 1 in the following manner:

1. (Amended) A method for moving a carriage assembly from an initial position to a target position relative to a storage medium having a center and a circumference, and rotating relative to the [said] carriage assembly at a circumferential velocity about the [said] center, said method comprising the steps of:

determining a first radial distance between the [said] initial position of the [said] carriage assembly and the [said] center of the [said] storage medium;

determining a second radial distance between the [said] target position of the [said] carriage assembly and the [said] center of the [said] storage medium;

determining a circumferential distance between the [said] initial position of the [said] carriage assembly and the [said] target position of the [said] carriage assembly [taken parallel to said circumference of said storage medium];

determining an initial circumferential velocity of the [said] storage medium about the [said] center of the [said] storage medium; and

calculating a velocity trajectory relative to said first radial distance, said second radial distance, said circumferential distance, and said initial circumferential velocity so [such] that[, if] when the [said] carriage assembly is moved from the [said] initial position to the [said] target position with said velocity trajectory, the [said] carriage assembly will arrive radially and circumferentially at the [said] target position at substantially the same time[; and

moving said carriage assembly from said initial position to said target position substantially at said velocity trajectory].

Please add the following claims 17-47:



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2~~17~~. The method according to claim 1 wherein said circumferential distance between the initial position of the carriage assembly and the target position of the carriage assembly is taken parallel to the circumference of the storage medium.

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~~18~~. The method according to claim 1 including the further step of moving the carriage assembly from the initial position to the target position substantially at said velocity trajectory.

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~~19~~. The method according to claim 1 further including the step of determining a target circumferential velocity of the storage medium about the center of the storage medium.

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~~20~~. The method according to claim ~~19~~ further including the step of applying a force to the storage medium to change the rotation thereof from said initial circumferential velocity to said target circumferential velocity.

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~~21~~. The method according to claim ~~19~~ wherein said velocity trajectory is relative to a desired circumferential velocity.

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~~22~~. The method according to claim ~~19~~ wherein the carriage assembly will arrive radially and circumferentially at the target position at substantially the same time when moved with said velocity trajectory from the initial position to the target position, and when said initial circumferential velocity of the storage medium is changed to said target circumferential velocity.



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23. The method according to claim 19 wherein the storage medium achieves said target circumferential velocity before the carriage assembly arrives at the target position.

24. The method according to claim 19 wherein the storage medium achieves said target circumferential velocity at substantially the same time as the carriage assembly arrives at the target position.

25. A control apparatus, comprising:

a carriage assembly movable from an initial position to a target position relative to a respective storage medium having a center and a circumference, said respective storage medium rotating relative to said carriage assembly at a circumferential velocity about said center;

means for determining a first radial distance between said initial position of said carriage assembly and said center of the storage medium;

means for determining a second radial distance between said target position of said carriage assembly and said center of the storage medium;

means for determining a circumferential distance between said initial position of said carriage assembly and said target position of said carriage assembly;

means for determining an initial circumferential velocity of the storage medium about said center of the storage medium; and

means for calculating a velocity trajectory relative to said first radial distance, said second radial distance, said circumferential distance, and said initial circumferential velocity so that when said carriage assembly is moved from said initial position to said target position with said velocity trajectory, said carriage assembly will arrive radially and circumferentially at said target position at substantially the same time.

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26. The apparatus according to claim 25 wherein said circumferential distance between said initial position of said carriage assembly and said target position of said carriage assembly is taken parallel to said circumference of the storage medium.

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27. The apparatus according to claim 25 further including means for moving said carriage assembly from said initial position to said target position substantially at said velocity trajectory.

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28. The apparatus according to claim 25 further including means for determining a target circumferential velocity of the storage medium about said center thereof.

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29. The apparatus according to claim 28 further including means for applying a force to the storage medium to change the rotation thereof from said initial circumferential velocity to said target circumferential velocity.

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30. The apparatus according to claim 28 wherein said velocity trajectory is relative to a desired circumferential velocity.

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31. The apparatus according to claim 28 wherein said carriage assembly arrives radially and circumferentially at said target position at substantially the same time when moved with said velocity trajectory from said initial position to said target position, and when said initial circumferential velocity of the storage medium is changed to said target circumferential velocity.

32. The apparatus according to claim 28 wherein the storage medium achieves said target circumferential velocity before said carriage assembly arrives at said target position.

33. The apparatus according to claim 28 wherein the storage medium achieves said target circumferential velocity at substantially the same time as said carriage assembly arrives at said target position.

34. An optical disc system operated according to the method recited in any one of claims 1, 17, 18, 19, 20, 21, 22, 23, or 24.

35. An optical disc system including the control apparatus recited in any one of claims 25, 26, 27, 28, 29, 30, 31, 32, or 33.

36. A method for moving a carriage assembly from an initial position to a target position relative to a storage medium having a center and a circumference, and rotating relative to the carriage assembly at a circumferential velocity about the center, said method comprising the steps of:

determining a first radial distance between the initial position of the carriage assembly and the center of the storage medium;

determining a second radial distance between the target position of the carriage assembly and the center of the storage medium;

determining a circumferential distance between the initial position of the carriage assembly and the target position of the carriage assembly taken parallel to said circumference of said storage medium;

determining an initial circumferential velocity of the storage medium about the center of the storage medium;

calculating a velocity trajectory relative to said first radial distance, said second radial distance, said circumferential distance, and said initial circumferential velocity so that when the carriage assembly is moved from the initial position to the target position with said velocity trajectory, the carriage assembly will arrive radially and circumferentially at the target position at substantially the same time; and

moving the carriage assembly from the initial position to the target position substantially at said velocity trajectory.

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~~37~~ 55. A control apparatus, comprising:

a carriage assembly movable from an initial position to a target position relative to a respective storage medium having a center and a circumference, said respective storage medium rotating relative to said carriage assembly at a circumferential velocity about said center;

a first measuring assembly utilized to determine a first radial distance between said initial position of said carriage assembly and said center of the storage medium;

a second measuring assembly employed to determine a second radial distance between said target position of said carriage assembly and said center of the storage medium;

a third measuring assembly implemented to determine a circumferential distance between said initial position of said carriage assembly and said target position of said carriage assembly;

a first detector assembly activated to determine an initial circumferential velocity of the storage medium about said center of the storage medium; and

a processor operated to calculate a velocity trajectory relative to said first radial distance, said second radial distance, said circumferential distance, and said initial circumferential velocity so that when said carriage assembly is



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moved from said initial position to said target position with said velocity trajectory, said carriage assembly will arrive radially and circumferentially at said target position at substantially the same time.

38. The apparatus according to claim 37 wherein said circumferential distance between said initial position of said carriage assembly and said target position of said carriage assembly is taken parallel to said circumference of the storage medium.

39. The apparatus according to claim 37 further including an actuator employed to move said carriage assembly from said initial position to said target position substantially at said velocity trajectory.

40. The apparatus according to claim 37 further including a second detector assembly implimented to determine a target circumferential velocity of the storage medium about said center thereof.

41. The apparatus according to claim 40 further including a motor that applies a force to the storage medium to change the rotation thereof from said initial circumferential velocity to said target circumferential velocity.

42. The apparatus according to claim 40 wherein said velocity trajectory is relative to a desired circumferential velocity.

43. The apparatus according to claim 40 wherein said carriage assembly arrives radially and circumferentially at said target position at substantially the same time when moved with said velocity trajectory from said initial position to



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